

WHAT IS CLAIMED IS:

1. A display device forming a board for mounting a connector which allows inputting of video data thereon and a board for mounting a display control circuit to be connected to the connector thereon on a surface of a display module opposite to an observation side, wherein

the board for mounting the connector thereon and the board for mounting the display control circuit thereon are physically separated from each other and, further, an area of the board for mounting the display control circuit thereon is set smaller than an area of the board for mounting the connector thereon.

2. A display device comprising a display panel PNL, another member different from the display panel PNL which is mounted on a back surface of the display panel, and a board for mounting the connector which allows inputting of video data and a display control circuit which is connected to the connector, wherein

the board for mounting the connector thereon and the board for mounting the display control circuit thereon are physically separated from each other,

the board for mounting the display control circuit thereon is arranged to be brought into contact with a back surface of a region of the display panel PNL except for a display portion, and the board for mounting the connector is arranged to be brought into contact with a back surface of the another member.

3. A display device according to claim 2, wherein the

board for mounting the display control circuit thereon includes a multilayered wiring layer and the number of stacked layers is larger than the number of stacked layers of the board for mounting the connector.

4. A display device according to claim 2, wherein an area of the board for mounting the display control circuit thereon is set smaller than an area of the board for mounting the connector thereon.

5. A display device according to claim 2, wherein signal lines which are formed on the display panel PNL are electrically connected with terminals which are pulled out from the display control circuit on a surface of the board on which the display control circuit is mounted opposite to a mounting surface for the display control circuit.

6. A display device according to claim 5, wherein the surface of the board on which the display control circuit is mounted opposite to the mounting surface for the display control circuit faces a surface of the display panel PNL opposite to a surface on which the signal lines are mounted in an opposed manner, and the signal lines of the display panel PNL and terminals of the board for mounting the display control circuit are electrically connected with each other by way of a flexible printed circuit board having a conductive layer on one side thereof.

7. A display device according to claim 2, wherein first

terminals which are arranged in parallel to each other are formed on the display panel PNL on a surface opposite to the board for mounting the display control circuit, second terminals which are arranged in parallel to each other are formed on a surface of the board for mounting the display control circuit thereon opposite to the display panel PNL, and the first terminals and the second terminals which correspond to each other are electrically connected with each other by way of respective conductive portions formed in the inside of a clip which is mounted in a state that the clip clamps side surface portions of the boards which mount the display panel PNL and the display control circuit thereon.

8. A display device according to claim 2, wherein first terminals which are arranged parallel to each other are formed on the display panel PNL on a surface opposite to the board for mounting the display control circuit, second terminals which are arranged parallel to each other are formed on a surface of the board for mounting the display control circuit thereon opposite to the display panel PNL, and the first terminals and the second terminals which correspond to each other are electrically connected with each other by way of a flexible printed circuit board which is arranged at side surface portions of the boards which mount the display panel PNL and the display control circuit thereon.

9. A display device according to claim 2, wherein the

display control circuit board is arranged along a side on which a scanning signal drive circuit of the display panel PNL is arranged, the board for mounting the connector thereon extends toward another end side while setting a portion thereof which is connected with the display control circuit board as one end thereof, the connector is arranged such that the direction that terminals thereof are arranged is substantially aligned with the extending direction of the board, and a width of the connector in the direction that the terminals are arranged in parallel is set larger than a width of the connector in the direction which crosses the extending direction of the board.

10. A display device according to claim 2, wherein the board for mounting the connector thereon is replaced with a member which pulls out a bundle of cables from the connector and at least fixing of the connector to the display panel PNL is performed using an adhesive tape.

11. A display device according to claim 2, wherein a fuse for preventing the generation of an eddy current to the display control circuit board is mounted on the board for mounting the connector thereon.

12. A display device according to claim 2, wherein a data storage medium is mounted on the board for mounting the display control circuit thereon.

13. A display device according to claim 2, wherein a data storage medium is mounted on the board for mounting the connector

thereon.

14. A display device according to claim 12, wherein a first data storage medium is mounted on the board for mounting the connector thereon, a second data storage medium is mounted on the board for mounting the display control circuit thereon, information to be supplied to the outside is set in the first data storage medium, and information to be supplied to the inside is set in the second data storage medium.

15. A display device according to claim 12, wherein the display device includes a DA converter which generates gray scale voltages based on information stored in the data storage medium.

16. A display device according to claim 15, wherein the DA converter is incorporated into a video signal drive circuit.

17. A display device according to claim 15, wherein the DA converter is incorporated into the display control circuit.

18. A display device having boards which mount a connector for allowing inputting of video data and a display control circuit which is connected to the connector thereon, wherein the board for mounting the connector thereon and the board for mounting the display control circuit thereon are physically separated from each other and, further, the board for mounting the display control circuit thereon is arranged on a back surface of a display drive circuit which is mounted on a display panel PNL,

the display drive circuit is constituted of a plurality of semiconductor devices, and

power source is supplied to the respective semiconductor devices from the board for mounting the display control circuit thereon and, further, the number of power source supply portions and the corresponding number of semiconductor devices are set equal in a state that other semiconductor devices are not interposed in a path from a power source supply portion to the respective semiconductor devices.

19. A display device according to claim 18, wherein the power source supply portions to the display drive circuit are provided in plural numbers, and the semiconductor devices which are arranged between one power source supply portion and another power source supply portion are provided in plural numbers.

20. A display device according to claim 19, wherein the number of semiconductor devices arranged between one power source supply portion and another power source supply portion is 2.

21. A display device according to claim 19, wherein the number of power source supply portions to the display drive circuit is the odd number and one of the power source supply portions is positioned outside one end of the display drive circuit which is constituted of a plurality of semiconductor devices.

22. A display device according to claim 21, wherein the

number of semiconductor devices is 3 and the number of power source supply portions is 2.

23. A display device according to claim 21, wherein the power source supply portions which are positioned outside one end of the display drive circuit are positioned at a side of the board on which the display drive circuit is formed which extends beyond another board which faces the board on which the display drive circuit is formed.

24. A display device having boards which mount a connector for allowing inputting of video data and a display control circuit which is connected to the connector thereon, wherein

the board for mounting the connector thereon and the board for mounting the display control circuit thereon are physically separated from each other and, further, the board for mounting the display control circuit is arranged such that one side thereof with respect to an imaginary line extending in the longitudinal direction is positioned on a back surface of a display panel PNL and another side with respect to the imaginary line is exposed from the display panel PNL, and

notches are formed in a side of the portion of the display control circuit board which is exposed from the display panel PNL, the notches are cut out along the direction orthogonal to the side, and end sides of the notches are aligned with the imaginary line.

25. A display device according to claim 24, wherein the

display device includes at least a frame which houses the display panel PNL and the board for mounting the display control circuit thereon, and a member which fixes the frame with screws, and distal end portions of the screws which penetrate the frame are positioned in the inside of the notches formed in the display control circuit board.

26. A display device according to claim 24, wherein the notches are formed in plural numbers.

27. A display device having boards which mount a connector for allowing inputting of video data and a display control circuit which is connected to the connector thereon, wherein

the board for mounting the connector thereon and the board for mounting the display control circuit thereon are physically separated from each other and, further, the board for mounting the display control circuit is arranged such that one side thereof with respect to an imaginary line extending in the longitudinal direction is positioned on a back surface of a display panel PNL and another side with respect to the imaginary line is exposed from the display panel PNL, and

a mark is formed on a surface of the display panel PNL such that the mark is aligned with a portion of a side of the board for mounting the display control circuit which is positioned on a back surface of the display panel PNL.

28. A display device according to claim 27, wherein the mark is formed in the vicinity of a flexible printed circuit

board which establishes an electrical connection between the board for mounting the display control circuit and the display panel PNL.

29. A display device according to claim 28, wherein the display control circuit is provided with a positioning notches in the vicinity of the flexible printed circuit board.

30. A display device having boards which mount a connector for allowing inputting of video data and a display control circuit which is connected to the connector thereon, wherein the board for mounting the connector thereon and the board for mounting the display control circuit thereon are physically separated from each other and, the board for mounting the display control circuit is positioned on a back surface of the display panel PNL,

a first mark is formed on a region of the display panel PNL which the display control circuit board faces in an opposed manner, and a second mark is formed on a region of the display control circuit board which the display panel PNL faces in an opposed manner, and

the first mark and the second mark are constituted as marks for positioning the display control circuit board with respect to the display panel PNL.

31. A manufacturing method of a display device which includes at least a display panel PNL and a board which mounts a connector for allowing inputting of video data and a display

control circuit which is connected to the connector thereon,
wherein

the board for mounting the connector thereon and the board
for mounting the display control circuit are physically
separated from each other,

the board for mounting the display control circuit is
arranged on a back surface of the display panel PNL at a region
except for a display part, and

the method includes a step in which after the board for
mounting the display control circuit is arranged on the back
surface of the display panel PNL, an inspection is performed
by driving the display device based on the board for mounting
the display control circuit thereon.

32. A manufacturing method of a display device which
includes at least a display panel PNL and a board which mounts
a connector for allowing inputting of video data and a display
control circuit which is connected to the connector thereon,
wherein

the board for mounting the connector thereon and the board
for mounting the display control circuit are physically
separated from each other,

the board for mounting the display control circuit is
arranged on a back surface of the display panel PNL at a region
except for a display part, and

the method includes a step in which after the board for

mounting the display control circuit is arranged on the back surface of the display panel PNL, an inspection is performed by driving the display device based on the board for mounting the display control circuit thereon, and a step in which the board for mounting the connector thereon is mounted.

33. A manufacturing method of a display device according to claim 31, wherein the display device is a notebook type personal computer.

34. A manufacturing method of a display device according to claim 31, wherein the display device is a monitor.

35. A manufacturing method of a display device according to claim 31, wherein the display device is a television receiver set.

36. A manufacturing method of a display device according to claim 32, wherein the display device is a notebook type personal computer.

37. A manufacturing method of a display device according to claim 32, wherein the display device is a monitor.

38. A manufacturing method of a display device according to claim 32, wherein the display device is a television receiver set.